

## ABSTRACT

A coal formation may be treated using an in situ thermal process. A mixture of hydrocarbons,  $H_2$ , and/or other formation fluids may be produced from the formation. Heat may be applied to the formation to raise a temperature of a portion of the formation to a pyrolysis temperature. A portion of a formation may be heated from a plurality of heat sources to a temperature sufficient to allow generation of a first synthesis gas having a low  $H_2$  to CO ratio. A second portion of a formation may generate synthesis gas having a  $H_2$  to CO ratio greater than the first synthesis gas. A portion of the first synthesis gas may be blended with a portion of the second synthesis gas to produce a blend synthesis gas having a desired  $H_2$  to CO ratio.